

Electroplating, Plating, Polishing, Anodizing, and Coloring: 2002

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2002 Economic Census

Manufacturing

Industry Series



U S C E N S U S B U R E A U

Helping You Make Informed Decisions

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)				
332813, Electroplating, plating, polishing, anodizing, and coloring	2 923	3 050	61 093	1 923 945	47 864	94 264	1 265 832	3 775 567	1 708 122	5 487 592	265 884
2002..	N	N	70 092	2 097 407	55 652	112 318	1 355 558	4 038 417	1 856 246	5 894 632	214 076
2001..	N	N	75 287	2 274 710	60 403	119 325	1 471 497	4 516 120	2 033 205	6 552 060	254 920
2000..	N	N	72 330	2 123 218	58 016	115 749	1 366 984	4 272 424	1 865 715	6 136 303	246 867
1999..	N	N	75 163	2 180 909	59 725	119 490	1 399 046	4 200 645	1 807 373	6 021 389	312 905
1998..	N	N	74 631	2 089 931	58 133	115 129	1 314 744	4 156 206	1 828 896	5 998 431	294 209
1997..	3 286	3 401									

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
332813, Electroplating, plating, polishing, anodizing, and coloring												
United States	1	3 050	827	61 093	1 923 945	47 864	94 264	1 265 832	3 775 567	1 708 122	5 487 592	265 884
Arizona	3	48	5	452	13 209	356	638	9 285	25 621	8 437	34 187	2 328
Arkansas	—	14	1	600	20 738	544	1 286	18 462	47 823	25 602	73 115	1 439
California	2	570	172	11 586	341 129	9 335	18 138	232 032	611 673	237 759	854 029	47 936
Colorado	1	32	4	348	11 789	244	508	6 922	19 529	11 618	31 263	2 083
Connecticut	1	86	33	2 392	85 194	1 839	3 571	54 574	159 188	90 440	250 359	10 213
Illinois	1	256	82	5 939	205 830	4 469	9 229	127 102	416 189	199 772	617 471	25 731
Indiana	1	87	38	2 275	71 206	1 771	3 633	46 255	145 428	64 373	209 842	8 842
Iowa	5	16	2	186	4 700	148	194	3 121	10 121	3 841	13 966	1 497
Louisiana	1	16	1	130	3 741	80	145	2 106	15 058	16 466	30 673	1 152
Massachusetts	2	87	32	1 998	70 474	1 492	3 061	42 643	131 974	43 794	175 902	9 290
Michigan	1	205	66	5 935	187 843	4 644	9 405	124 441	387 598	146 764	532 282	29 265
Minnesota	1	77	25	2 234	70 056	1 751	3 618	47 242	126 308	64 595	191 022	9 128
Missouri	2	52	12	821	24 037	662	1 266	15 890	53 748	27 496	79 672	6 380
Nevada	3	14	6	271	8 436	218	474	5 456	14 879	3 364	18 264	521
New Jersey	2	86	14	979	36 539	680	1 267	19 946	59 871	30 177	90 413	6 123
New York	2	121	25	1 885	53 774	1 458	2 758	33 992	110 910	37 676	148 743	6 610
North Carolina	1	56	10	694	23 421	546	1 106	16 094	58 012	41 652	100 162	2 879
Ohio	—	256	76	5 722	172 061	4 596	8 770	117 338	416 154	287 613	701 234	25 311
Oklahoma	4	34	7	422	13 881	329	602	9 496	24 860	7 092	32 001	2 168
Oregon	2	42	7	596	17 551	502	903	13 104	32 068	9 091	41 232	1 991
Pennsylvania	1	116	30	2 033	68 911	1 542	2 895	42 379	132 918	68 645	206 119	8 961
Rhode Island	2	69	15	1 256	38 813	1 016	1 942	26 660	72 963	35 580	107 934	4 699
Tennessee	1	53	18	1 230	35 597	1 007	1 872	25 960	66 899	34 942	101 582	8 189
Texas	1	153	35	2 456	77 515	1 952	4 119	51 628	143 104	51 806	193 495	7 123
Washington	1	40	8	805	27 257	563	1 018	15 182	44 029	9 921	54 055	1 553
Wisconsin	1	96	26	2 307	73 624	1 844	3 794	50 000	128 059	43 234	171 390	7 666

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
332813, Electroplating, plating, polishing, anodizing, and coloring	
Companies ¹	number.. 2 923
All establishments ²	number.. 3 050
Establishments with 1 to 19 employees	number.. 2 223
Establishments with 20 to 99 employees	number.. 730
Establishments with 100 employees or more	number.. 97
All employees ³	number.. 61 093
Total compensation	\$1,000.. 2 265 792
Annual payroll	\$1,000.. 1 923 945
Total fringe benefits	\$1,000.. 341 847
Production workers, average for year	number.. 47 864
Production workers on March 12	number.. 47 741
Production workers on May 12	number.. 48 008
Production workers on August 12	number.. 47 821
Production workers on November 12	number.. 47 727
Production worker hours	1,000.. 94 264
Production worker wages	\$1,000.. 1 265 832
Total cost of materials	\$1,000.. 1 708 122
Materials, parts, containers, packaging, etc., used	\$1,000.. 1 340 516
Resales	\$1,000.. 33 788
Purchased fuels	\$1,000.. 84 918
Purchased electricity	\$1,000.. 154 236
Contract work	\$1,000.. 94 664
Quantity of electricity purchased for heat and power	1,000 kWh.. 2 256 844
Quantity of electricity generated less sold for heat and power	1,000 kWh.. 19 506
Total value of shipments	\$1,000.. 5 487 592
Primary products value of shipments	\$1,000.. 5 117 949
Secondary products value of shipments	\$1,000.. 196 458
Total miscellaneous receipts	\$1,000.. 173 185
Value of resales	\$1,000.. 40 380
Contract receipts	\$1,000.. 107 359
Other miscellaneous receipts	\$1,000.. 25 446
Primary products specialization ratio	percent.. 96
Value of primary products shipments made in all industries	\$1,000.. 5 662 247
Value of primary products shipments made in this industry	\$1,000.. 5 117 949
Value of primary products shipments made in other industries	\$1,000.. 544 298
Coverage ratio	percent.. 90
Value added	\$1,000.. 3 775 567
Total inventories, beginning of year	\$1,000.. 312 383
Finished goods inventories	\$1,000.. 92 159
Work-in-process inventories	\$1,000.. 48 631
Materials and supplies inventories	\$1,000.. 171 607
Total inventories, end of year	\$1,000.. 286 622
Finished goods inventories	\$1,000.. 89 141
Work-in-process inventories	\$1,000.. 47 746
Materials and supplies inventories	\$1,000.. 149 749
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. 2 927 589
Total capital expenditures (new and used)	\$1,000.. 265 884
Buildings and other structures (new and used)	\$1,000.. 26 038
Machinery and equipment (new and used)	\$1,000.. 239 846
Automobiles, trucks, etc., for highway use	\$1,000.. 20 172
Computers and peripheral data processing equipment	\$1,000.. 20 808
All other expenditures for machinery and equipment	\$1,000.. 198 866
Total retirements	\$1,000.. 143 175
Gross value of depreciable assets at end of year	\$1,000.. 3 050 298
Depreciation charges during year	\$1,000.. 215 990
Total rental payments	\$1,000.. 140 152
Buildings and other structures	\$1,000.. 96 579
Machinery and equipment	\$1,000.. 43 573
Total other expenses ⁴	\$1,000.. 909 326
Response coverage ratio ⁵	percent.. 78
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 66 756
Communications services ⁴	\$1,000.. 15 714
Legal services ⁴	\$1,000.. 10 562
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 13 630
Advertising and promotional services ⁴	\$1,000.. 14 606
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 6 269
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 37 750
Management consulting and administrative services ⁴	\$1,000.. 21 600
Taxes and license fees ⁴	\$1,000.. 40 475
All other expenses ⁴	\$1,000.. 681 964

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
332813, Electroplating, plating, polishing, anodizing, and coloring											
All establishments	1	3 050	61 093	1 923 945	47 864	94 264	1 265 832	3 775 567	1 708 122	5 487 592	265 884
Establishments with—											
1 to 4 employees	8	1 092	2 172	69 260	1 710	3 237	45 997	133 711	42 057	175 747	12 784
5 to 9 employees	3	499	3 451	111 839	2 565	4 981	74 680	216 335	73 192	289 586	18 263
10 to 19 employees	2	632	8 865	278 543	6 661	12 410	180 103	537 515	180 593	717 114	46 047
20 to 49 employees	1	504	15 728	495 659	12 278	23 983	326 890	989 115	348 063	1 337 028	81 087
50 to 99 employees	—	226	15 205	487 715	12 089	24 497	318 004	933 862	536 750	1 478 563	49 798
100 to 249 employees	—	86	11 545	358 428	9 130	17 864	230 276	733 799	392 088	1 125 591	47 883
250 to 499 employees	—	8	2 460	75 828	1 979	4 262	52 513	137 098	51 677	186 527	6 061
500 to 999 employees	—	3	1 667	46 673	1 452	3 030	37 369	94 132	83 702	177 436	3 961
1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	1 040	2 710	85 738	2 169	4 185	57 041	164 772	52 065	216 575	16 095

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
332813	Electroplating, plating, polishing, anodizing, and coloring	3 050	61 093	1 923 945	47 864	94 264	1 265 832	3 775 567	1 708 122	5 487 592	265 884
3328130	Electroplating, plating, polishing, anodizing, and coloring	3 050	61 093	1 923 945	47 864	94 264	1 265 832	3 775 567	1 708 122	5 487 592	265 884

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
332813	Electroplating, plating, polishing, anodizing, and coloring	N	X	X	5 662 247
	1997	N	X	X	6 146 442
3328130	Electroplating, plating, polishing, anodizing, and coloring	N	X	X	5 662 247
	1997	N	X	X	6 146 442
33281301	Electroplating, plating, polishing, and anodizing	N	X	X	5 471 284
	1997	N	X	X	5 983 720
3328130101	Electroplating, plating, polishing, anodizing, and coloring	1 733	X	X	5 152 253
	1997	N	X	X	N
3328130102	Laminating steel for the trade	200	X	X	319 031
	1997	N	X	X	N
3328130Y	Electroplating, plating, polishing, anodizing, and coloring, nsk, total	N	X	X	190 963
	1997	N	X	X	162 722
3328130YWW	Electroplating, plating, polishing, anodizing, and coloring, nsk, for nonadministrative-record establishments	N	X	X	57 744
	1997	N	X	X	727
3328130YWY	Electroplating, plating, polishing, anodizing, and coloring, nsk, for administrative-record establishments	N	X	X	133 219
	1997	N	X	X	161 995

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997**

[Not applicable for this report.]

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
332813	Electroplating, plating, polishing, anodizing, and coloring		
00900001	Total materials .....2002..	X	1 340 516
	.....1997..	X	1 403 641
33200005	Fabricated metal products, including forgings .....2002..	X	102 693
	.....1997..	X	151 866
33100035	Castings, rough and semifinished.....2002..	X	2 094
	.....1997..	X	18 632
33120001	Steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	238 901
	.....1997..	X	152 249
331000AJ	Nonferrous metal shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	27 356
	.....1997..	X	14 106
32521101	Plastics materials and resins .....2002..	X	23 538
	.....1997..	X	38 733
32551002	Paints, varnishes, stains, lacquers, shellacs, japans, enamels, and allied product .....2002..	X	18 873
	.....1997..	X	N
32599801	Foundry chemicals, metal treating compounds, and plating compounds .....2002..	X	230 792
	.....1997..	X	281 251
32500067	Other chemicals and allied products (excluding plastics materials and resins, paints, varnishes and allied products, foundry chemicals, metal treating compounds, and plating compounds).....2002..	X	136 795
	.....1997..	X	111 904
32791001	Grinding wheels and other abrasive products, excluding industrial diamonds .....2002..	X	26 527
	.....1997..	X	19 785
00970099	All other materials and components, parts, containers, and supplies.....2002..	X	176 807
	.....1997..	X	228 855
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	356 140
	.....1997..	X	386 260

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.